ALMAG

DATA SHEET:
610 CW610N

HOT FORGING

HUG

610 CW610N

Lead Muntz alloy for hot forging.

It combines the excellent hot-forging properties of “Muntz metal” with the machinability given by the presence of a significant amount of lead. The high copper content also ensures a good resistance to corrosion, combined with good mechanical and cold deformability characteristics.

NAME OF ALLOY

UNI EN: CW610N - CuZn39Pb0.5	**ASTM:** C36500	**DIN**: 2.0372	**BS:** CZ123-CZ137	**GOST:** LS60-1

CHEMICAL COMPOSITION UNI EN 12165 ED.2016

Cu	Pb	Sn	Fe	Ni	Al	Zn	Other elements
min. 59.0 max. 60.5 %	0.2 0.8 %	≤0.2 %	≤0.2 %	≤0.3 %	≤0.05 %	difference	≤0.2 %

HEAT TREATMENTS

STRESS RELIEVING

Enables the redistribution of tensions induced by mechanical processing or cold plastic deformation reducing the risk of stress corrosion cracking.
The treatment consists of heating the items to 200°C - 250°C for 2 hours and cooling within the furnace.
The validation of the stress relieving treatment can be performed with the ISO 6957 test.

OTHER TREATMENTS

No other heat treatments are required.

TECHNOLOGICAL PROPERTIES

low ☐☐☐☐☐☐☐ excellent

Structure	α+β	**Machinability**	■■□□□□□
Density	8.4 kg/cm^2	**Weldability**	■■■□□□□
Electrical conductivity	28% IACS	**Hot forming**	■■■□□□□
Coeff. of thermal expansion	20.8 10^{-6}/K	**Cold forming**	■■■□□□□
Thermal conductivity*	123 W/(m K)	**Corrosion resistance****	Not resistant
Specific heat	380 J/(kg K)		
Elasticity module	105 kN/mm^2		
Melting point	885-900 °C		

*at room temperature
**use care to ascertain compatibility with chemical substances

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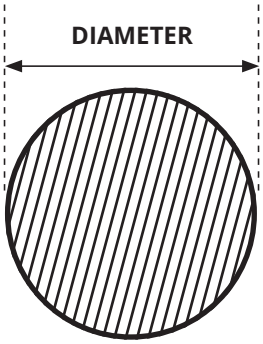

MECHANICAL PROPERTIES UNI EN 12165 ED.2016

Condition of material	Diameter in mm		Hardness HB	
	from	to (included)	min.	max.
M	All		As a product	
H070	8	120	70	170

Any special hardness values must be defined when ordering

Rm N/mm²	$Rp_{0.2}$ N/mm²	A%
340-420*	200-240*	23-43*

*The values shown are not regulated and are purely indicative

DIMENSIONS, TOLERANCES, AND STRAIGHTNESS UNI EN 12165 ED.2016

Nominal diameter (mm)		TOLERANCES		Diameter mm		Length of bar	Tolerance mm
		Class A	Class B				
10	18	+/- 0.25	+/- 0.14	10	30	3.0 - 5.0	+/- 100
18	30	+/- 0.30	+/- 0.17	30	50	3.0 - 5.0	+/- 200
30	50	+/- 0.60	+/- 0.20	50	80	3.0	+/- 300
50	80	+/- 0.70	+/- 0.37				
80	120	+/- 2					

The standard "Extruded calibrated" product is produced in Class B up to and including Ø80 mm
Semi-finished products over Ø45 mm can be supplied in the "pressed" and "rolled" forms with Class A tolerance

Diameter (mm)		Deviation from straightness in mm	
		Every 400 mm	Every m of length L ≥ 1
10	60	1.5	3.0 x L

BAR FINISHING AND PACKAGING

Bar ends	finishing with saw cut and chamfer
Bar surface	not pickled
Packaging	1000 kg bundle – 3/5 metal straps different bundle packagings and quantities are possible upon request
Identification	adhesive label on bundle strap

COMPANY WITH
MANAGEMENT SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =
= ISO 14001 =
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